

CLAIMS

1. A process for extracting and refining the components of pea flour, which consists of the following steps:
 - 5 a) preparing a flour by grinding dried peas which have been previously cleaned, sorted, blanched, freed of dust,
 - 10 b) placing the flour thus obtained in water,
 - c) separating the components of the pea flour using at least one of the pieces of equipment from a potato starch factory selected from the group consisting of hydrocyclones, centrifugal decanters and sieves, without a step for
 - 15 separating the internal fibers of the pea being carried out beforehand.
2. The process as claimed in claim 1, wherein the pieces of equipment from a potato starch factory consist of centrifugal decanters and sieves.
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3. The process as claimed in claim 2, consisting of the succession of the following steps:
 - 25 a) suspending the pea flour in water,
 - b) fractionating said suspension on centrifugal decanters, so as to isolate a fraction rich in proteins and solubles from a fraction consisting of the starch and internal fiber mixture,
 - c) isolating the protein component of said fraction rich in proteins and solubles by a selective protein purification technique,
 - 30 d) treating the fraction consisting of the mixture of starch and internal fibers on sieves so as to separate a fraction rich in internal fibers from a fraction rich in starch,
 - e) isolating the starch component of said fraction rich in starch.

4. The process as claimed in claim 1, wherein the pieces of equipment from a potato starch factory consist of hydrocyclones and centrifugal decanters.

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5. The process as claimed in claim 4, which consists of the succession of the following steps:

- a) suspending the pea flour in water,
- 10 b) fractionating said suspension on hydrocyclones, so as to isolate a fraction rich in starch from a fraction consisting of a mixture of protein, internal fiber and solubles,
- c) optionally concentrating the suspension rich in starch on said hydrocyclones so as to purify 15 the starch thereof,
- d) treating the fraction consisting of the mixture of proteins, internal fibers and solubles on centrifugal decanters so as to separate a fraction rich in internal fibers from a fraction rich in proteins and solubles,
- 20 e) isolating the protein component of said fraction rich in proteins and solubles by a selective protein purification technique.

25 6. The process as claimed in claim 5, wherein the pea flour is suspended in water at a pH between 6.2 and 7, at room temperature and for 30 min.

30 7. The process as claimed in claim 1, wherein the proteins are purified using a technique selected from the group consisting of techniques of precipitation of proteins at their isoelectric pH and of membrane separation of the ultrafiltration type.

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8. A process for extracting and refining the components of pea flour, comprising at least one step for separating said components of pea flour using at least one of the pieces of equipment from

a potato starch factory, selected from the group consisting of hydrocyclones, centrifugal decanters and sieves.

5 9. A device for extracting and refining the components of pea flour, which comprises at least one of the pieces of equipment from a potato starch factory, selected from the group consisting of hydrocyclones, centrifugal decanters and
10 sieves.

10. The device as claimed in claim 9, comprising, as pieces of equipment from a potato starch factory, sieves and centrifugal decanters.

15 11. The device as claimed in claim 9, comprising, as pieces of equipment from a potato starch factory, hydrocyclones and centrifugal decanters.

20 12. A pea starch obtained by a process as claimed in claim 1 or by using a device as claimed in claim 9, having:

25 - a residual protein content of between 0.3 and 0.5%,
- a pH value of between 3.5 and 7, preferably between 5 and 7,

30 13. The pea starch as claimed in claim 12, having a viscosity, determined according to a test A, of between 950 and 1 100 BU, preferably between 970 and 1 050 BU.